

Claims Listing:

1. (Currently Amended) A method of securing a sealing washer to one surface of a metal sheet while ~~welding~~ bonding a fastener to a ~~second~~ another surface of a metal sheet;

the method comprising:

providing a sealing washer which when engaged with a heated surface bonds to such surface,

bonding the fastener to the a first surface of the metal sheet by a process which to achieve such bonding heats the a second surface of the metal sheet proximate to the fastener,

urging a the sealing washer into onto the second surface while so still heated to heat from the fastener bonding step thus heating the sealing washer and thereby bond bonding the sealing washer to the second surface.

2. (Currently Amended) A method as claimed in claim 1 wherein the metal sheet having an opening therethrough,

the fastener having a head, the head of the fastener being bonded to a ~~second~~ the first surface of the metal sheet about the opening, and the washer being bonded to the second surface of the metal sheet about the opening.

3. (Original) A method as claimed in claim 2 wherein the fastener comprises a stud with a shank extending from the head through the opening through the metal sheet.

4. (Withdrawn) A method as claimed in claim 2 wherein the fastener comprises a nut with an aperture therethrough positioned in alignment with the opening through the metal sheet.

5. (Original) A method as claimed in claim 2 wherein the process by which the fastener is bonded to the first surface of the sheet is selected from welding, brazing and soldering.

6. (Original) A method as claimed in claim 2 wherein the process by which the fastener is bonded to the first surface of the sheet is a welding process selected from resistance welding and drawn-arc welding.

7. (Currently Amended) A method as claimed in claim 2 wherein the sealing member washer is urged into the heated second surface while the sealing member is held in a washer holder having a face with a socket extending into the holder from the face and adapted to receive the washer therein for urging the washer into contact with the second surface.

8. (Currently Amended) A method as claimed in claim 7 wherein the washer comprises a compressible member of having a thickness when uncompressed,

the socket extending into the holder to a socket end having a depth less than the thickness of the washer when uncompressed whereby with the face contacting the second surface, the washer is compressed between the socket end and the second surface.

9. (Currently Amended) A method ~~as claimed in claim 8~~ of securing a sealing washer to one surface of a metal sheet while bonding a fastener to another surface of a metal sheet;

the method comprising:

providing a sealing washer which when engaged with a heated surface bonds to such surface,

providing a metal sheet having an opening therethrough,

providing a fastener having a head,

bonding the head of the fastener to a first surface of the metal sheet about the opening by a process which to achieve such bonding heats a second surface of the metal sheet proximate to the fastener about the opening,

urging the sealing washer onto the second surface about the opening while still heated from the fastener bonding step thus heating the sealing washer and thereby bonding the sealing washer to the second surface about the opening,

wherein the sealing washer is urged into the heated second surface while the sealing member is held in a washer holder having a face with a socket extending into the holder from the

face and adapted to receive the washer therein for urging the washer into contact with the second surface.

wherein the socket extends into the holder to a socket end,
a piston is slidably disposed within the socket,
a washer reception space is provided in the socket outwardly from the piston,
the piston is biased outwardly from the socket and thereby urges the washer ~~into~~ onto
the second surface.

10. (Currently Amended) A method as claimed in claim 9 wherein the piston is movable between a retracted inner position and an outer position,

in the retracted inner position, the washer reception space is provided in the socket between the piston and the face of sufficient depth to receive the washer fully within the socket and spaced inwardly from the face,

in movement of the piston towards the outer position, the piston urges the washer ~~into~~ onto the second surface.

11. (Currently Amended) A method as claimed in claim 9 including a mechanism to move the piston between the inner and outer positions and control the timing of when the piston urges the washer into the second surface relative to when the ~~first~~ second surface is heated.

12. (Original) A method as claimed in claim 11 wherein the mechanism comprises a pneumatic mechanism.

13. (Currently Amended) A method as claimed in claim 2 including compressing the head onto the ~~second~~ first surface of the sheet between a first electrode engaging the head and a second electrode engaging the ~~first~~ second surface of the sheet, welding the head to the ~~second~~ first surface of the sheet by electrical resistance welding to heat the ~~first~~ second surface of the sheet proximate to the ~~first~~ second electrode, and urging a sealing washer into the heated ~~first~~ second surface ~~with the second electrode~~ to heat the sealing washer and thereby bond the sealing washer to the ~~first~~ second surface.

14. (Currently Amended) A method as claimed in claim 13 wherein the two electrodes comprise:

a first electrode engaging the fastener and urging it into the first surface, and a second electrode engaging the second surface,
the first and second electrodes sandwiching the fastener and sheet therebetween,
the washer disposed intermediate the second electrode and the second surface and urged ~~into~~ onto the second surface by the second electrode.

15. (Original) A method as claimed in claim 14 wherein the second electrode having a face to contact the second surface,

a socket extending into the electrode from the face and adapted to receive the washer therein for urging the washer into contact with the second surface while the face contacts the second surface.

16. (Withdrawn) A connecting plate comprising

a metal sheet having a first surface and a second surface with an opening therethrough,
a metal nut having an aperture therethrough,
the nut welded to the first surface with the aperture of the nut in alignment with the opening,

a sealing washer with a hole therethrough,
the sealing washer secured to the second surface with the hole of the washer in alignment with the opening,

the washer secured to the second surface by a process including urging the washer into the second surface while heating the washer with heat generated by welding of the nut to the metal sheet.

17. (Withdrawn) A plate as claimed in claim 16 wherein the heat is generated by electrical resistance welding of the nut to the metal sheet between two electrodes.

18. (Withdrawn) A connecting plate comprising
a metal sheet having a first surface and a second surface with an opening
therethrough,
a stud having a head and a shank extending therefrom,
the head of the stud welded to the first surface with the shank extending through the
opening,
a sealing washer with a hole therethrough,
the sealing washer secured to the second surface with the hole of the washer in
alignment with the opening,
the washer sealed to the second surface by a process including urging the washer
onto the second surface while heating the washer with heat generated by welding of the head of
the stud to the metal sheet.

19. (Withdrawn) A plate as claimed in claim 18 wherein the heat is generated by electrical
resistance welding of the stud to the metal sheet between two electrodes.

20. (Withdrawn) An electric resistance welding electrode having an electrode face to
engage a surface of a metal element,
a socket extending into the electrode from the face to a socket end,
the socket adapted to receive a seal member therein and for urging the seal member
into the surface of the metal element while the electrode face engages the surface.

21. (Withdrawn) An electrode as claimed in claim 16 wherein the socket including a central
bore therethrough adapted to receive a shank of a fastener member extending from the surface
outwardly.

22. (Withdrawn) An electrode as claimed in claim 17 wherein the socket includes an
annular space about the bore terminating at the socket end as an annular shoulder,
the seal member comprising an annular washer;
the annular space sized to receive the annular washer therein.

23. (New) In the manufacture of a connecting plate comprising:

a metal sheet having a first surface and a second surface with an opening therethrough,

a stud having a head and a shank extending therefrom,

the head of the stud welded to the first surface with the shank extending through the opening,

a sealing washer with a hole therethrough,

the sealing washer secured to the second surface with the hole of the washer in alignment with the opening and the shank of the stud extending through the hole of the washer,

the sealing washer comprising a washer which when engaged with a heated surface will bond to such surface,

the improvement comprising bonding the head of the fastener to the first surface by a method comprising:

bonding the head of the fastener to a first surface of the metal sheet by a process which to achieve such bonding heats a second surface of the metal sheet proximate to the fastener,

urging the sealing washer onto the second surface while still heated from the fastener bonding step thus heating the sealing washer and thereby bonding the sealing washer to the second surface.

24. (New) A method as claimed in claim 23 wherein the process by which the fastener is bonded to the first surface of the sheet is selected from welding, brazing and soldering.

25. (New) A method as claimed in claim 24 wherein the process by which the fastener is bonded to the first surface of the sheet is a welding process selected from resistance welding and drawn-arc welding.

26. (New) A method as claimed in claim 1 wherein the sealing washer comprises a thin planar member having a first sealing surface on one side thereof and a second sealing surface on another side thereof,

the method bonding the first sealing surface of the sealing washer to the second surface of the sheet to present the second sealing surface of the sealing washer directed away from the second surface of the sheet.

27. (New) A method as claimed in claim 1 wherein the sealing washer comprises a material which after being bonded to the second surface, if compressed between the second surface of the sheet and a surface of another element to be secured to the sheet via the stud, forms a seal between the second surface of the sheet and the surface of another element.

28. (New) A method as claimed in claim 23 further including after bonding the sealing washer to the second surface securing the connecting plate to another element with the stud with the sealing washer sandwiched between the second surface of the metal sheet and a surface of said another element forming a seal therebetween.